

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
9 September 2005 (09.09.2005)

PCT

(10) International Publication Number
WO 2005/081964 A3

- (51) International Patent Classification⁷: **A61K 35/62**
- (21) International Application Number:
PCT/US2005/005726
- (22) International Filing Date: 23 February 2005 (23.02.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/546,214 23 February 2004 (23.02.2004) US
60/563,566 19 April 2004 (19.04.2004) US
- (71) Applicant (for all designated States except US): STRATEGIC SCIENCE & TECHNOLOGIES, LLC [US/US]; 58 Charles Street, Cambridge, MA 02141 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): FOSSEL, Eric, Thor [US/US]; 909 West Roxbury Parkway, Chestnut Hill, MA 02467 (US).
- (74) Agent: CHEN, Tani; Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue, Boston, MA 02210 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- (88) Date of publication of the international search report: 8 December 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/081964 A3

(54) Title: TOPICAL DELIVERY OF A NITRIC OXIDE DONOR TO IMPROVE BODY AND SKIN APPEARANCE

(57) **Abstract:** This invention generally relates to improvement of the body and skin appearance, for example enhancing the appearance of sagging, wrinkled, or cellulite-afflicted areas of the skin and body, through the local delivery of a nitric oxide donor, for example, using delivery vehicles such as lotions, creams, liquids, and/or transdermal patches. In some embodiments, a delivery vehicle containing a nitric oxide donor, for example, L-arginine (an important biological precursor) or its derivatives in a sufficient concentration to improve the appearance of a selected area of the body may be applied. In certain cases, one or more agents may also be included that aid in the transfer of the nitric oxide donor into the tissue, which may overcome the resistance to transfer into the skin. Non-limiting examples of suitable agents include agents able to create hostile biophysical environments, for instance, choline chloride, magnesium chloride, and/or sodium chloride.